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Sent: Thursday, June 21, 2012 1:16 PM
To: Hanchett, James (DPH)
Subject: NEWS: Dam, We're Good...MOSES DCR Members key to Project Rehab

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Dam, We're Good!
Three MOSES Members Key to Rehabilitation of the Upper Mystic Lake Dam

The Upper Mystic Lake Dam, originally built in 1964, is listed on the National Register of Historic Places. The recent rehabilitation project, completed in part by the MA Department of Conservation & Recreation, addressed safety and flooding issues, as well as incorporated a much-needed fish ladder and a new fish passageway. Fish making their way to the native spawning grounds each spring include alewife, herring, shad and white perch.

The dam was built on the narrowest portion of two deep "lentic" lakes to create the Upper Mystic Lake and hydraulically separate it from the Lower Lake. It touches the towns of Arlington, Moulton and Winchester. The dam provided potable water to supply the growing population of Boston. It is a highly populated area that has experienced numerous floods in recent years, earning the large, significant hazard dam a "poor" condition classification by the Office of Dam Safety. After a flood in 2006 overtopped a low section, the potential impacts to downstream areas from future became apparent. It was this situation that increased the priority for project initiation and funding.

The dam's age, composition, as record of drawings, location in a densely populated, flood-prone area, as well as its importance as a natural, recreational and historic feature complicated the rehabilitation project's planning, design, permitting and construction. Additional challenges included: no permission to lower the lake level during construction; a boathouse housing a private boat club located on the embankment; multiple stakeholder groups along the Upper and Lower Lakes and the dam itself; and important fisheries resources.

The water supply function of the dam ended in the early 1990s, but by then the raised Upper Lake had become an important part of the landscape. The structure also seemed to become just a "part of the landscape," as maintenance lagged, the railway deteriorated and trees overtook the embankment. Ultimately, ownership of the dam passed to the Massachusetts Department of Conservation and Recreation. Repair studies began in the 1980s, but the major flooding in 2006 brought the situation to a head. The funding was made available to bring a 19th century dam into the 21st century. Construction began in 2009, endured historic floods in 2010 and was completed in 2011. The restored dam includes a rehabilitated primary spillway, an improved spillway bridge, two new bottom-hinged crest gates, a new secondary crest gateway, a composite steel-pile cutoff wall, embankment seepage controls, as well as a new fish and eel passage, or "ladder" facilities.

By Chad W. Cox, P.E., and Gregory W. Hunt of GZA GeoEnvironmental, Inc., with
MOSES members Mike Galvin, Paul DiPietro and Scott Ryan all with the
MA Department of Conservation and Recreation
(Missing from photo above: Scott Ryan and Brad Chase.)

Sincerely,
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